mental lawn shrubs, such as the box, the holly, the Portugal and bay laurels, are branched or feathered from the root, or near the root, and the leaves of all these species have little or no leaf stalk. Other trees, such as the common sycamore, the birch, the horse chestnut, the lime, the pear, the cherry, the apple, have more or less of an unbranched trunk, and the leaves growing on them have a leaf-stalk. Again, the leaves of certain species, such as the sycamore, the lime, the gooseberry, send off a number of main veins from the base, and the leaves of certain other plants, such as the rhododendron and azalea, are whorled round the branch, and in both these sorts of plants branches are found to collect near a point, or to whorl round the axis. The main axis of the laburnum and the broom is commonly subdivided into three main branches, corresponding to the triplet leaves. There is a farther correspondence between the angle at which the branches go off, and the angle at which the veins of the leaf go off. It is obvious at a glance that there is for every particular species a normal angle for the lateral veins of the leaf. Again, if any one carefully observe the skeleton of a tree, as seen between him and a clear sky, he will notice that for every particular species of tree there is a normal angle, (from which, however, there are many departures, caused by winds, friction, and other external causes,) at which the branches go off. And on comparing the two, the angle of venation and the angle of ramification, they will be found to be the same. Several other points of correspondence may be detected between the skeleton of the plant and its leaf, as, for example, between the curve of the branch and that of the vein. Generally the leaf, or rather the leafage, coming off at a given point, may be held as representing a branch, or the whole plant*

Turning from plants with expanded leaves to those with linear

leaves, we have been able to truce a beautiful morphological
order in pines and firs. It is interesting to trace the tmcccHsion
of whorls along the axis of the pine; to notice how parts not
conical are made to produce a figure conical throughout; how
the seed-vessels, as their name (COUCH) denotes, are made to

* These observa^oris were laid by tho author before th« botanical Society of Edinburgh in Juno 1851, (see Traiw. Kdin. Hot, Hoc., vol. iv.,) and before tlui Britiuh AHHociatirm in 1802, ami again in 18f>4. (fctow 8ocfc. liopory.) Hee also Balfour's Class Hook of Hot any, P. j. c. ii, g 3; und Typical Forum*